

# **EXHIBIT 2**

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF VIRGINIA  
Norfolk Division

CENTRIPETAL NETWORKS, LLC,  
Plaintiff,

v.

**UNDER SEAL**

Civil Action No. 2:21-CV-00137 (EWH)

PALO ALTO NETWORKS, INC.,  
Defendant.

**MEMORANDUM OPINION**

This matter is before the Court on post-trial motions filed by Palo Alto Networks, Inc. (“PAN”). PAN filed a Motion for Judgment as a Matter of Law (“JMOL”), ECF No. 900, and Motion for a New Trial (“Rule 59 Motion”), ECF No. 906. For the reasons stated below, PAN’s Motion for Judgment as a Matter of Law is GRANTED IN PART and DENIED IN PART and its Motion for a New Trial is DENIED.<sup>1</sup>

On January 31, 2024, following an eight-day jury trial, the jury returned a verdict in favor of Centripetal Networks, LLC (“Centripetal”). The jury found that PAN infringed all four of the Asserted Patents<sup>2</sup> and awarded Centripetal a lump sum royalty of \$151,500,000 for the life of the patents. Jury Verdict at 2–6, ECF No. 851. The jury also found that, related to claim eligibility, the claim elements of the ’903 Patent, ’573 Patent, and ’797 Patent (collectively, the “Correlation Patents”) were not well-understood, routine, and conventional. *Id.* at 7. After the jury returned its

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<sup>1</sup> The Court has determined that the issues are adequately presented in the briefing and a hearing is not necessary. E.D. Va. Loc. Civ. R. 7(J). Accordingly, the matter is ripe for adjudication.

<sup>2</sup> The Asserted Patents include U.S. Patent Nos. 10,567,437 (the “’437 Patent”), 10,530,903 (the “’903 Patent”), 10,659,573 (the “’573 Patent”), and 10,931,797 (the “’797 Patent”).

verdict, the Court directed the clerk not to enter judgment, and set a post-trial briefing schedule.<sup>3</sup> ECF No. 850.

PAN asserts that it is entitled to judgment as a matter of law on three issues: (1) that the Correlation Patents are directed to patent-ineligible subject matter under 35 U.S.C. § 101 and are therefore invalid; (2) that the infringement verdict as to the Asserted Patents is not supported by substantial evidence; and (3) that the damages award is not supported by substantial evidence and Centripetal is therefore entitled to no damages. JMOL at 1. In the alternative, PAN argues that it is entitled to a new trial due to the improper admission of evidence, erroneous jury instructions, and findings by the jury that went against the clear weight of the evidence. Rule 59 Mot. at 1.

For the reasons explained below, the Court finds that the Correlation Patents are patent eligible, and that substantial evidence supports the jury's infringement verdict and damages award as to those patents. However, the Court agrees with PAN that there was insufficient evidence to support the jury's finding of infringement as to the '437 Patent. The Court will therefore direct entry of judgment as a matter of law of non-infringement of the '437 Patent and reduce the jury award accordingly. The Court finds that a new trial is not required.

## I. LEGAL STANDARD

The law of the regional circuit governs post-trial motions for judgment as a matter of law and a new trial. *XY, LLC v. Trans Ova Genetics*, 890 F.3d 1282, 1290 (Fed. Cir. 2018). In the

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<sup>3</sup> During trial, Centripetal and PAN both moved for judgment as a matter of law. ECF Nos. 818, 841, 847. PAN's post-trial motion subsumes its previous motions, ECF Nos. 818, 847, but to the extent those motions are not subsumed they are denied. The jury returned a verdict in favor of Centripetal on all grounds except it did not find that PAN willfully infringed and awarded Centripetal damages in the form of a lump sum payment instead of a running royalty. Jury Verdict, ECF No. 851. Centripetal did not renew its motion for judgment as a matter of law. Having reviewed the record, the Court finds no clear error with respect to the jury's verdict on those issues, and therefore, Centripetal's motion, ECF No. 841, is denied.

Court of Appeals for the Fourth Circuit, “judgment as a matter of law may be granted only if, viewing the evidence in a light most favorable to the non-moving party (and in support of the jury’s verdict) and drawing every legitimate inference in that party’s favor, the only conclusion a reasonable jury could have reached is one in favor of the moving party.” *Drummond Coal Sales, Inc. v. Norfolk S. Ry. Co.*, 3 F.4th 605, 610 (4th Cir. 2021) (internal quotation marks and citations omitted). “So long as there exists ‘evidence upon which a jury could reasonably return a verdict for [the non-moving party],’” judgment as a matter of law should be denied. *EEOC v. Consol Energy, Inc.*, 860 F.3d 131, 141 (4th Cir. 2017) (quoting *Cline v. Wal-Mart Stores, Inc.*, 144 F.3d 294, 301 (4th Cir. 1998)). When addressing a motion for judgment as a matter of law, the court reviews all of the evidence in the record but “may not make credibility determinations or weigh the evidence.” *Reeves v. Sanderson Plumbing Prods., Inc.*, 530 U.S. 133, 150 (2000) (citations omitted).

The trial court may grant a new trial if “(1) the verdict is against the clear weight of the evidence, or (2) is based upon evidence which is false, or (3) will result in a miscarriage of justice, even though there may be substantial evidence which would prevent the direction of a verdict.” *LifeNet Health v. LifeCell Corp.*, 93 F. Supp. 3d 477, 488 (E.D. Va. 2015) (quoting *Atlas Food Sys. & Servs., Inc. v. Crane Nat’l Vendors, Inc.*, 99 F.3d 587, 594 (4th Cir. 1996)). However, an error in admitting or excluding evidence is not grounds for granting a new trial, unless the error affects a party’s “substantial rights.” *Biedermann Techs. GmbH & Co. KG v. K2M, Inc.*, 678 F. Supp. 3d 716, 720 (E.D. Va. 2023) (quoting Fed. R. Civ. P. 61).

## II. ANALYSIS

### A. Patent Eligibility of the Correlation Patents

PAN contends that the Correlation Patents are directed to patent-ineligible subject matter under 35 U.S.C. § 101 and are therefore invalid. “Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.” 35 U.S.C. § 101. However, not all ideas are patentable. In *Alice Corp. Pty. Ltd. v. CLS Bank International*, the Supreme Court outlined a two-step process to evaluate whether a claimed invention is unpatentable. 573 U.S. 208, 217–18 (2014). The court first determines whether the patent claim is “directed to” a patent-ineligible concept, such as an abstract idea. *Id.* at 217. If it is not, the inquiry is at its end—the claimed invention is eligible for patent protection. *Id.* If a claim is directed to an abstract idea, the court then examines whether the claim elements, considered “both individually and as an ordered combination,” contain an “inventive concept” that “transform[s] the nature of the claim into a patent-eligible application.” *Id.* (internal quotation marks and citations omitted). While patent eligibility is ultimately a question of law, it may contain underlying questions of fact. Specifically, at step two, “whether a claim limitation or combination of claim limitations is more than routine, conventional, or well-understood,” is a question of fact that weighs on whether there is an inventive concept. *Infernal Tech., LLC v. Sony Interactive Ent. LLC*, No. 2:19-cv-00248, 2021 WL 405813, at \*3 (E.D. Tex. Feb. 3, 2021) (first citing *Berkheimer v. HP, Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018); and then *PPS Data, LLC v. Jack Henry & Assocs.*, 404 F. Supp. 3d 1021, 1040 (E.D. Tex. 2019)).

PAN previously sought judgment on the pleadings that the asserted claims of the Correlation Patents were not eligible for patent protection under 35 U.S.C. § 101. ECF No. 455.

The Court deferred ruling on step one—whether the patent claims are directed to an abstract idea—and determined there was a question of fact related to step two: whether the claim elements, individually or as an ordered combination, involve only technology that a person of ordinary skill in the art would have considered “well-understood, routine, and conventional.” ECF No. 706. The Court submitted that question to the jury, which found that PAN did not prove by clear and convincing evidence that the elements were well-understood, routine, and conventional. Jury Verdict at 7.

PAN renews its argument that it is entitled to judgment as a matter of law that the Correlation Patents’ asserted claims are not eligible for patent protection. JMOL Mem. in Supp. at 1–10, ECF No. 902. In the alternative, PAN argues that it is entitled to a new bench trial on patent eligibility because the Court erred in submitting an issue related to patent eligibility to the jury and because the Court’s jury instruction on this issue was erroneous. Rule 59 Mem. in Supp. at 20–23, ECF No. 908.

### 1. The Correlation Patents

As noted above, the ’903 Patent, ’573 Patent, and ’797 Patent are of the same patent family and are collectively referred to as the Correlation Patents. The asserted claims of the Correlation Patents are claim 10 of the ’903 Patent; claims 1 and 9 of the ’573 Patent; and claims 1, 12, and 17 of the ’797 Patent. Claim 1 of the ’797 Patent discloses a method comprising:

determining, by a computing system, a first plurality of log entries corresponding to a first plurality of packets received by a network device from a first host located in a first network;

determining a second plurality of log entries corresponding to a second plurality of packets transmitted by the network device to a second host located in a second network;

correlating, by the computing system, the second plurality of packets transmitted by the network device with the first plurality of packets received by the network

device by comparing at least a first portion of the first plurality of log entries with at least a second portion of the second plurality of log entries;

determining a correlation based on correlating the first plurality of packets and the second plurality of packets;

generating, by the computing system and based on the determined correlation, one or more rules configured to identify packets received from the first host; and

provisioning a packet-filtering device with the one or more rules.

'797 Patent at 15:28–49.

Claims 12 and 17 of the '797 Patent are identical except that claim 12 involves a “computing device” with “one or more processors” and “memory storing instructions” and claim 17 involves “non-transitory computer-readable media.” *Id.* at 16:51–17:8, 17:48–18:18. The asserted claims of the '903 Patent and '573 Patent detail the same process but with minor differences. For example, the '903 Patent specifies that the “network device” referenced is a “proxy” and that the information collected includes packet receipt and transmission timestamps. '903 Patent at 16:50–17:21. The '573 Patent deals with “encrypted” packets. '573 Patent at 15:32–34. While Centripetal notes these differences, it does not advance the argument that any claim limitations beyond those found in claim 1 of the '797 Patent differ in any meaningful way. JMOL Opp'n at 10, ECF No. 940. Therefore, the Court will treat that claim as representative. *See Berkheimer*, 881 F.3d at 1365.

## 2. Step one of the *Alice* test

*Alice* step one asks whether the patent claim is directed to a patent-ineligible concept, such as an abstract idea. PAN argues that the asserted claims of the Correlation Patents are directed to the abstract idea of “collecting information, analyzing it, and displaying certain results of the collection and analysis.” JMOL Mem. in Supp. at 2 (internal quotation marks and citations omitted). PAN contends that the asserted claims are directed to “collecting and correlating (i.e.,

analyzing) information and generating a result based on the correlation.” *Id.* (citation omitted). Centripetal disagrees, arguing that the asserted claims offer concrete solutions for improving computer and network operations and thus are patent eligible. JMOL Opp’n at 7. The Court agrees with Centripetal.

The Court of Appeals for the Federal Circuit has recognized that “software-based innovations can make ‘non-abstract improvements to computer technology’ and be deemed patent-eligible subject matter at [*Alice* step one].” *Finjan, Inc. v. Blue Coat Sys., Inc.*, 879 F.3d 1299, 1304 (Fed. Cir. 2018) (quoting *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (Fed. Cir. 2016)). This inquiry turns on whether the “focus of the claims is on the specific asserted improvement in computer capabilities . . . or, instead, on a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.” *Enfish*, 822 F.3d at 1335–36. Additionally, the claimed advance must be sufficiently concrete, i.e., the claims must do more “than describe a desired function or outcome, without providing any limiting detail.” *Affinity Labs of Tex., LLC v. Amazon.com Inc.*, 838 F.3d 1266, 1269–70 (Fed. Cir. 2016). In its analysis, the Court considers “the claim as a whole, and read[s] it in light of the specification.” *Packet Intel. LLC v. NetScouts Sys., Inc.*, 965 F.3d 1299, 1309 (Fed. Cir. 2020) (citations omitted).

Here, the asserted claims of the Correlation Patents are focused on improving computer capabilities rather than merely using computers as a tool. The focus of the claims of the Correlation Patents concerns the identification of packets (i.e., data)<sup>4</sup> transversing computer networks. Through the correlating process described in the claims, a rule is generated and provisioned to a packet filtering device “to identify packets received from the first host,” ’797 Patent at 15:45–49;

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<sup>4</sup> As noted in the Court’s *Markman* Order, “both parties agree[] that a packet is ‘data units for transmission over a network.’” Mem. Op. & Order at 23, ECF No. 452 (citations omitted).



'573 Patent at 15:49–55, or an indication of the first host is generated and transmitted, '903 Patent at 17:19–21. As the specification explains,<sup>5</sup> this claimed advance addresses a problem found in computer networks where a network device “obfuscates” or “obscures” the origin of packets. '797 Patent at 1:32–36, 1:62–2:4. The asserted claims are focused on a technical solution improving computer capabilities, namely, they claim a process to identify the origin of packets being transmitted over networks. For this reason, the Correlation Patents are distinguishable from the other cases cited by PAN.<sup>6</sup>

The claimed technological advance disclosed by the Correlation Patents contains limiting details rendering the claims sufficiently concrete. The claims recite a method (or apparatus) that determines log entries corresponding to packets received by a network device from a first and second host. *Id.* at 15:29–36. The packets are then correlated by comparing the log entries. *Id.* at 15:37–42. Once it is determined that there is a correlation, the correlation is used to generate a rule or indication that is “configured to identify packets received from the first host.” *Id.* at 15:45–47. The Court finds that the claims recite a “particular solution”—comparing log entries and generating a rule or indication that identifies the packets received from the first host—to solve the “identified problem”—identifying the origins of packets (data) transversing through computer

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<sup>5</sup> At *Alice* step one, the Court may rely on the specification to shed light on the technological problem the claims are directed at solving. *See, e.g., Packet Intel. LLC*, 965 F.3d at 1309–10 (“The specifications explain that known network monitors were unable to identify disjointed connection flows to each other, and the focus of the claims is a specific improvement in computer technology: a more granular, nuanced, and useful classification of network traffic.”).

<sup>6</sup> *See, e.g., SAP Am. Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018) (claiming “a system for providing statistical analysis of investment information over an information network”); *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1351–52 (Fed. Cir. 2016) (claiming a method for monitoring an electric power grid).

networks.<sup>7</sup> The claims go beyond merely describing a desired outcome, and instead contain a detailed process that occurs within computer networks, making the claims sufficiently concrete.

As a result, the Court finds that the asserted claims of the Correlation Patents are directed towards a concrete improvement in computing technology and are thus patent eligible.

### 3. Step two of the *Alice* test

Even if the Court found that the Correlation Patents' asserted claims were directed to an abstract idea, the Court finds that the claims contain an inventive concept. "The second step of the *Alice* test is satisfied when the claim limitations involve more than performance of well-understood, routine, [and] conventional activities previously known to the industry." *Berkheimer*, 881 F.3d at 1367 (alteration in original) (internal quotation marks and citations omitted). "While patent eligibility is ultimately a question of law . . . [w]hether something is well-understood, routine, and conventional to a skilled artisan at the time of the patent is a factual determination." *Id.* at 1369.

Here, the jury concluded that PAN did not prove by clear and convincing evidence that that the claim elements of the Correlation Patents were "well-understood, routine, and conventional." Jury Verdict at 7. PAN argues that the evidence introduced at trial failed to establish an inventive concept because Centripetal did not identify claim elements other than those directed to abstract ideas and because the claims "merely recite implementing the abstract ideas using conventional

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<sup>7</sup> To the extent that PAN argues that there is no limiting principle because it is unclear what is being compared during the "correlation" process, the claims of the '903 Patent expressly contemplate comparing timestamps, '903 Patent at 16:65–17:14, and the specifications of the '573 Patent and '797 Patent provide further examples of what is occurring when log entries are compared. *See, e.g.*, '573 Patent at 8:53–58, 9:1–16, 12:18–29, 12:34–48 (providing examples of correlating); '797 Patent at 8:54–62, 9:5–31, 12:22–33, 12:34–62 (same).

computer elements.” JMOL Mem. in Supp. at 6–7. The Court disagrees and finds that the jury’s verdict was supported by substantial evidence.

PAN argues that the Correlation Patents are directed to the abstract idea of “collecting information, analyzing it, and displaying certain results of the collection and analysis.” *Id.* at 2.<sup>8</sup> However, the inventive concept identified by Centripetal at trial goes beyond displaying results. At trial, Centripetal’s expert, Michael Goodrich, opined that the “responsive to” element of the asserted claims provided the inventive concept. *See, e.g.*, Tr. 1771:8–14, 1772:18–24, 1773:16–19.<sup>9</sup> That element requires that “responsive to” or “based on” the correlation, a rule or indication is generated that can identify packets received from the first host. ’903 Patent at 17:19–21; ’573 Patent at 15:49–52; ’797 Patent at 15:45–47. Dr. Goodrich testified that this process of “actionable correlation,” i.e. correlation that gives the system the ability to respond, reduced the time that computers needed to identify threats, and therefore was not routine, well-known, and conventional in 2015, the effective date of the Correlation Patents. Tr. 1767:9–23, 1769:1–13. Further, Dr. Goodrich opined that the prior art identified by PAN did not disclose this “responsive to” limitation. Tr. 1774:14–1777:8. The jury was entitled to credit Dr. Goodrich’s testimony and reject the opinion proffered by PAN’s expert. *See Sanderson Plumbing Prods.*, 530 U.S. at 150–51. The Court finds that Dr. Goodrich’s testimony was sufficient to support the jury’s verdict.

Centripetal also elicited testimony from David Ahn, a named inventor of the Correlation Patents, and Jonathan Rogers, Centripetal’s Chief Operating Officer, both of whom testified that

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<sup>8</sup> PAN attempts to recast the abstract idea as “collecting packet-related information, correlating it to identify the source of the packets, and generating rules based on the correlation.” JMOL Mem. in Supp. at 6. However, this is inconsistent with their arguments at step one and merely summarizes the asserted claims at a high level of generality.

<sup>9</sup> The Court will use “Tr.” to refer to the trial transcripts. *See* ECF Nos. 864–71.

the asserted claims were an improvement over the technology available at the time. For example, Ahn described the challenge in the industry that the Correlation Patents were directed at solving, the patents' solution to that problem, and how the improvement was more beneficial than other technologies common at the time. *See* Tr. 441:23–445:4, 449:20–450:23. Ahn testified that because Centripetal had developed and deployed “scaled intelligence,” i.e. the ability to process large amounts of data, Centripetal “saw the problem before it became an industry-wide problem.” Tr. 445:15–446:5. Having gained this early knowledge, Ahn testified that Centripetal “created the technology” to address the problem and that the process described in the Correlation Patents was a “unique solution.” Tr. 446:20–22, 447:15–19, 450:11–23. Similarly, Rogers explained that Centripetal's product, which practiced the asserted claims, required custom hardware up until 2019. Tr. 1756:2–11. This testimony is probative as to whether the techniques taught by the asserted claims were an improvement over the prior art and further supports a finding that the claim was unconventional. *See, e.g., Cellspin Soft, Inc. v. Fitbit, Inc.*, 927 F.3d 1306, 1318–19 (Fed. Cir. 2019).

The jury concluded that PAN did not prove by clear and convincing evidence that the asserted claims of the Correlation Patents were “well-understood, routine, and conventional.” Having considered the record, the Court concludes that this finding was supported by substantial evidence. The jury's verdict also provides an additional basis to conclude that the asserted claims were patent eligible.

#### 4. Motion for a new trial

PAN seeks a new trial as to patent eligibility on two grounds. First, PAN argues that patent eligibility under § 101 should have been decided by the Court and that the Court erred in submitting a factual question bearing on *Alice* step two to the jury. Rule 59 Mem. in Supp. at 20–21. Having

found the Correlation Patents patent eligible at *Alice* step one, it was not necessary for the jury to answer the step two question. Although this would render PAN's argument for a new trial on this issue as moot, the Court will briefly address the argument.

The Court submitted the factual question of whether the Correlation Patents were "well-understood, routine, and conventional" to the jury. PAN argues the Court should have made that determination. Once a jury trial demand is made, all triable issues must be submitted to the jury unless the parties stipulate otherwise or "the court, on motion or on its own, finds that on some or all of those issues there is no federal right to a jury trial." Fed. R. Civ. P. 39(a). As previously discussed, the Federal Circuit has recognized that while patent eligibility is ultimately a question of law, "[w]hether something is well understood, routine, and conventional to a skilled artisan at the time of the patent is a factual determination." *Berkheimer*, 881 F.3d at 1369. District courts have therefore found it appropriate to submit that question to a jury. *See, e.g., Innovation Scis., LLC v. Amazon.com, Inc.*, No. 4:18-cv-474, 2021 WL 2075677, at \*5 (E.D. Tex. May 24, 2021); *Infernal Tech., LLC*, 2021 WL 405813, at \*3; *TRUSTID, Inc. v. Next Caller, Inc.*, No. 18-172, 2022 WL 318299, at \*1 n.5 (D. Del. Jan. 5, 2022). Here, Centripetal properly made a jury demand, and PAN has provided no rule or binding precedent that suggests that the factual question bearing on *Alice* step two falls outside of the federal right to a jury trial. Accordingly, the Court denies PAN's request for a new bench trial on the issue.

Second, PAN argues that even if the issue were properly submitted to the jury, the Court's jury instruction on the issue was erroneous. *Id.* at 21–23. While the Court's earlier ruling would again render this argument moot, the Court will nevertheless address PAN's second argument. "A party seeking to alter a judgment based on erroneous jury instructions must establish that (1) it made a proper and timely objection to the jury instructions, (2) those instructions were legally

erroneous, (3) the errors had prejudicial effect, and (4) it requested alternative instructions that would have remedied the error.” *Advanced Display Sys. v. Kent State Univ.*, 212 F.3d 1272, 1281 (Fed. Cir. 2000) (internal citations omitted); *see Nazario v. Gutierrez*, No. 2:21-cv-169, 2023 WL 3231612, at \*7 (E.D. Va. May 3, 2023). PAN made a proper and timely objection to the challenged jury instruction, satisfying the first factor. *See* Tr. 1802:7–17. PAN cannot, however, establish the second and fourth factors: the instruction was not legally erroneous and, even if it was, PAN’s proposed alternative instruction would not have remedied the error.

Regarding the conventionality of the asserted claims of the Correlation Patents, the Court instructed the jury as follows:

to succeed on its claim for invalidity for a failure to claim patent-eligible subject matter, Palo Alto must show by clear and convincing evidence that as to each [asserted claim] . . . all the elements, when taken individually and when taken as an ordered combination, involve only technology which a person of ordinary skill in the art would have considered well-understood, routine, and conventional as of the February 10, 2015 effective filing date for those patents.

Considering the elements of the asserted claims as an ordered combination means considering whether an asserted claim is well-understood, routine, and conventional when taken as a whole.

Tr. 1871:14–24; *see* Jury Verdict at 7 (instructing the jury similarly). PAN argues that the Court’s instruction was erroneous because it “fail[ed] to properly limit the inquiry to whether ‘claim limitations *other than* the invention’s use of the ineligible [abstract ideas]’ were well-understood, routine, and conventional.” Rule 59 Mem. in Supp. at 22 (second alteration in original) (citation omitted). Specifically, PAN takes issue with the phrases “all the elements” and “taken as a whole.” *Id.* at 21–22.

The Court’s jury instruction was an accurate statement of the law and is consistent with how other courts have instructed the jury regarding *Alice* step two. *See Innovation Scis., LLC v. Amazon.com, Inc.*, No. 4:18-cv-474, ECF No. 845 at 21–22 (E.D. Tex. Sept. 9, 2020); *TRUSTID*,

*Inc. v. Next Caller, Inc.*, No. 18-172, ECF No. 295 at 26 (D. Del. July 16, 2022). As stated in *Alice*, when searching for an inventive concept, “elements of each claim” must be considered “both individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” *Alice*, 573 U.S. at 217 (quoting *Mayo Collaborative Servs. v. Prometheus Lab’ys, Inc.*, 566 U.S. 66, 79 (2012)). The *Alice* Court reaffirmed the “the general rule that patent claims ‘must be considered as a whole.’” *Id.* at 218 n.3 (quoting *Diamond v. Diehr*, 450 U.S. 175, 188 (1981)). Further, the Federal Circuit has explained that “an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces.” *Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016). The Court’s instruction properly articulated this principle when directing the jury to consider “all the elements” of the asserted claims and the elements “taken as a whole.” Accordingly, the Court’s instruction was not legally erroneous.

To the extent that PAN argues that the jury should have been instructed “to exclude the claimed abstract ideas” from their consideration, Rule 59 Reply at 18, ECF No. 957, PAN’s proposed jury instruction would not cure that deficiency.<sup>10</sup> PAN proposed the following instruction:

you will decide whether Palo Alto Networks has shown by clear and convincing evidence that the elements of the Asserted Claims . . . , when taken individually and when taken as an ordered combination, recite implementing the claimed idea using something more than technology that a person of ordinary skill in the art would have considered well-understood, routine, and conventional as of the February 10, 2015 effective filing date of the [Asserted Patents].

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<sup>10</sup> Even courts that have decided that the patent was directed to an abstract idea at *Alice* step one have not instructed the jury on the abstract idea. See *PPS Data, LLC v. Jack Henry & Assocs., Inc.*, No. 2:18-cv-7, ECF No. 156 at 21 (E.D. Tex. Sept. 6, 2019) (finding the asserted claims are directed to an abstract idea at *Alice* step one); *id.*, ECF No. 175 at 24–25 (instructing the jury).

Am. Proposed Jury Instr. at 28, ECF No. 790. Similar to the challenged instruction, PAN's proposal (correctly) directs the jury to consider "the elements of the Asserted Claims . . . , when taken individually and when taken as an ordered combination." *Id.* But the instruction does not instruct the jury to identify the allegedly abstract idea and to not consider those elements. PAN's proposed instruction therefore suffers from the same alleged deficiency as the Court's instruction. Because PAN's alternative instructions would not have remedied the error, PAN fails to establish that it is entitled to a new trial based on an erroneous jury instruction.

## **B. Infringement of the Correlation Patents**

The jury returned a verdict of infringement as to all the asserted claims of the Correlation Patents. Jury Verdict at 2–3. PAN argues that there is insufficient evidence to support that verdict because Centripetal failed to establish that all of the claim limitations were satisfied. PAN asserts that Centripetal failed to demonstrate that the accused technology: (1) correlates the packets received and transmitted by a "network device" by analyzing specific log entries; (2) performs the claimed remedial step "responsive to" or "based on" the correlating; and (3) for the '903 Patent, "determin[es] . . . differences between at least one packet transmission time indicated by transmission timestamps and at least one packet receipt time indicated by receipt timestamps." JMOL Mem. in Supp. at 10–11 (emphasis omitted). In the alternative, PAN argues that the jury's infringement verdict went against the clear weight of the evidence. Rule 59 Mem. in Supp. at 23. The Court will address each issue in turn.

### 1. Correlating log entries

PAN first contends that Centripetal failed to demonstrate that the accused technology correlates the packets received by a network device with packets transmitted by the network device. JMOL Mem. in Supp. at 14–16. The asserted claims of the Correlation Patents require that



the computing system compare “the first plurality of log entries” with a “second plurality of log entries” where the first plurality of log entries corresponds to “packets received by a network device from a first host located in a first network” and the second plurality of log entries correspond to “packets transmitted by the network device to a second host located in a second network.” ’797 Patent at 15:29–42; *see* ’573 Patent at 15:29–45; ’903 Patent at 16:65–17:14. In Centripetal’s claim mapping, the accused network device is PAN’s Next Generation Firewall (“NGFW”), the first plurality of log entries are pre-Network Address Translation (“NAT”) addresses and the second plurality of log entries are post-NAT addresses,<sup>11</sup> and the pre- and post-NAT log entries are correlated by either the Automated Correlation Engine or Cortex XDR. JMOL Mem. in Supp. at 14; JMOL Opp’n at 13.

PAN asserts that there is insufficient evidence that the Automated Correlation Engine and Cortex XDR actually compare the pre- and post-NAT addresses, and therefore, the correlation limitation is not met. JMOL Mem. in Supp. at 14. PAN argues that Dr. Cole only testified that the Automated Correlation Engine and Cortex XDR receive certain data fields and perform some unspecified analysis. *Id.* at 14–16.

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<sup>11</sup> Network Address Translation, or “NAT” is a technology that alters a packet’s information as it passes through a network device, like a firewall, so that the identifying address for a single computer on a network is replaced with (or translated to) a generic address used for the entire network. Tr. at 544:17–545:12. Centripetal’s expert, Dr. Eric Cole, testified that the pre-NAT addresses include information such as source address, destination address, and source IP that are present when the packet enters the firewall, and the post-NAT addresses refer to the new source and destination information after the firewall performs network address translation. Tr. 561:3–562:4. PAN, in passing, notes that it disputes that post-NAT addresses satisfy the “second plurality of log entries” limitation, arguing that the log entry does not “correspond to packets ‘transmitted’” by the network device. JMOL Mem. in Supp. at 14 n.19. However, there was substantial evidence introduced at trial to support that this claim limitation was satisfied. *See e.g.*, Tr. 560:14–562:6 (citing PX-393); Tr. 562:20–565:8 (citing PX-400 at 165, 225); Tr. 610:15–612:23 (citing PX-400 at 6, 8).

Dr. Cole's testimony was not so limited. As to the Automated Correlation Engine, Dr. Cole relied on PAN's administrator guides and source code to conclude that the NGFW captures pre- and post-NAT information in traffic logs and that the Automated Correlation Engine then correlates those traffic logs by comparing timestamps and pre- and post-NAT addresses. Tr. 561:3–562:6 (citing PX-393 at 568–70)<sup>12</sup> (explaining that pre- and post-NAT information is captured in traffic logs); Tr. 571:25–572:19 (quoting the testimony of Nir Zuk,<sup>13</sup> the founder and Chief Technology Officer of PAN); Tr. 573:14–575:9 (citing PX-400 at 036, 213–14) (describing source code that, in Dr. Cole's opinion, demonstrates that the Automated Correlation Engine correlates traffic logs, specifically timestamps); Tr. 588:8–15 (explaining that like timestamps, pre- and post-NAT addresses are compared). Dr. Cole additionally testified that he conducted testing of the NGFW with the Automated Correlation Engine to confirm the specified correlation of pre- and post-NAT addresses. Tr. 572:20–573:9.

Regarding Cortex XDR, Dr. Cole offered detailed expert testimony explaining how PAN's product met the correlation limitation. Relying on the Cortex XDR administrator guide and fact testimony from PAN employees, Dr. Cole explained that Cortex XDR correlates traffic logs from the NGFW. Tr. 613:25–615:10<sup>14</sup> (quoting PX-192 at 356); *see* Cohen Test. at 17:24–18:08, ECF No. 860-1 (acknowledging that Cortex XDR can stitch traffic logs). Dr. Cole also relied on the

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<sup>12</sup> “PX” refers to exhibits introduced by Plaintiff at trial. “DX” refers to exhibits introduced by Defendant at trial. Exhibit page citations are based on the last three digits of the bates number.

<sup>13</sup> Zuk testified that the Automated Correlation Engine “is an engine that takes logs – log entries that are generated by the firewall and allows a user to set rules as to looking at information from within those logs and log entries, comparing the information, and generating new logs based on that.” Zuk Test. 9:07–9:14, ECF No. 860-1.

<sup>14</sup> “Cortex XDR correlates together the firewall network logs – which include both the pre-NAT and post-NAT logs – endpoint raw data and cloud data across your detection sensors. The act of correlating logs from different sources is referred to as ‘log stitching’ and helps you identify the source and destination of security processes and connections made over the network.”

product's source code to demonstrate that Cortex XDR receives pre- and post-NAT addresses from the NGFW and then correlates the logs through "log stitching." *See* Tr. 611:15–613:9 (citing PX-400 at 002, 006–08) (explaining that Cortex XDR is receiving the pre- and post-NAT log entries); Tr. 609:1–16 (quoting PX-192 at 356) (explaining "log stitching" as "[t]he act of correlating logs from different sources"); Tr. 617:3–15 (citing PX-400 at 052). Dr. Cole also pointed to the outcome of the correlation—the identification of the source of packets—as supporting his opinion that the pre- and post-NAT log entries are correlated. *See* Tr. 614:4–12 ("The act of correlating logs from different sources . . . helps you identify the source and destination of security processes and connections made over the network." (quoting PX-192 at 356)). Based on this evidence, Dr. Cole concluded that Cortex XDR's correlation of pre- and post- NAT addresses satisfied the correlation limitation. Tr. 617:25–618:4.

Accordingly, the Court finds that Dr. Cole's testimony, as well as the evidence that he relied upon, provided substantial evidence from which the jury could conclude that the correlation limitation was satisfied. The Court also finds that the jury's conclusion was not against the clear weight of the evidence.

## 2. Generating a rule or indication "responsive to" or "based on" the correlation

PAN next argues that Centripetal failed to demonstrate that the accused technology performs the claimed remedial step "responsive to" or "based on" the correlation. JMOL Mem. in Supp. at 16–17. The asserted claims require that "responsive to" or "based on" the correlation, a rule or indication is generated that "identif[ies] packets received from the first host." '797 Patent at 15:45–49; '573 Patent at 15:49–52; '903 Patent at 15:56–60. The Court interpreted this limitation to require that "the determined correlation is the impetus for the remedial steps." Mem. Op. & Order at 14–15, ECF No. 452. PAN asserts that there is insufficient evidence to support that

(1) the correlation is the impetus for the remedial step and (2) the Automated Correlation Engine and Cortex XDR identify packets received from “the first host.” JMOL Mem. in Supp. at 16.

PAN is wrong on both counts. First, Dr. Cole identified source code that, in his opinion, demonstrated that the correlation was the impetus for the remedial action. Tr. 597:24–598:13<sup>15</sup> (citing PX-400 at 163–64) (referencing the Automated Correlation Engine source code); Tr. 622:13–25 (citing PX-400 at 230) (referencing Cortex XDR source code). Dr. Cole’s interpretation of this portion of the source code was unrebutted by PAN’s expert. Second, as to the issue of whether Dr. Cole established the remedial step (that packets received from the first host were identified), while it is accurate that Dr. Cole largely referenced the remedial step as identifying a “malicious” or “compromised” host, it is clear from the context of his testimony that the malicious or compromised host was the “first host.” *See, e.g.*, Tr. 577:5–579:23, 614:4–615:10. Dr. Cole relied on the Cortex XDR and Automated Correlation administrator guides, which supported his opinion. *See, e.g.*, Tr. 577:19–578:6, 614:4–12, 627:15–24; PX-192 at 356 (“The act of correlating logs from different sources is referred to as log stitching and helps you identify the *source* and *destination* of security processes and connections made over the network.”). There was sufficient evidence upon which the jury could conclude that the remedial step limitation was satisfied, and this conclusion did not go against the clear weight of the evidence.

### 3. Determining differences between timestamps

Finally, PAN asserts that Centripetal failed to demonstrate that, as to the ’903 Patent, the accused technology determines differences between packet transmission timestamps and packet receipt timestamps. JMOL Mem. in Supp. at 17–18. The asserted claim of the ’903 Patent requires

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<sup>15</sup> Testifying that the source code includes “programming logic” and an “if” statement related to the correlating logs, and “goes through the logic where it would then tag . . . that new output of the correlation and then use that to create a rule to be able to update the firewall rule set.”

“determin[ing] . . . differences between at least one packet transmission time indicated by transmission timestamps and at least one packet receipt time indicated by receipt timestamps.” ’903 Patent at 17:10–14. PAN argues that Dr. Cole’s opinion that the NGFW with the Automated Correlation Engine compares a transmission timestamp with a receipt timestamp is conclusory, and accordingly, there is insufficient evidence to demonstrate that this limitation is met. JMOL Mem. in Supp. at 17–18.

PAN’s argument is misplaced. Relying on the Automated Correlation Engine’s administrator guide, Dr. Cole testified that the traffic logs generated by the NGFW include log entries for start time and elapsed time. Tr. 567:21–25 (citing PX-393 at 615). Dr. Cole testified that start time “is the time of the session start” and elapsed time is “the elapsed time of the session.” *Id.* Dr. Cole described the source code and explained how, in his opinion, the source code demonstrated that the “elapsed time” field was calculated by subtracting the transmission time stamp (representing the end time) from the start time. Tr. 567:7–570:12 (citing PX-393 at 615; PX-400 at 170). PAN and its expert strenuously disagreed with Dr. Cole’s opinion. Tr. 1439:10–15 (Dr. Villasenor’s testimony that there is no logging of transmission time). However, “with conflicting expert testimony before it, the jury was free to make credibility determinations and believe the witness it considers more trustworthy.” *Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1062 (Fed. Cir. 2016) (en banc) (internal quotation marks and citation omitted). Here, the jury did just that. The Court finds that there was sufficient evidence upon which the jury could conclude that the accused products determined the difference between transmission and receipt time stamps, and such a conclusion did not go against the clear weight of the evidence.

### C. Infringement of the '437 Patent

The jury returned a verdict of infringement as to claim 8 of the '437 Patent. Jury Verdict at 4. Again, PAN asserts that several claim limitations were not met. Specifically, PAN argues that there is insufficient evidence to establish that (1) “one or more” provisioned rules are “applied to all network traffic” and (2) the accused LAN switch and switching matrix drop packets, as required by the asserted claim. JMOL Mem. in Supp. at 18. The Court finds that there is substantial evidence to support the provisioned rule limitation; however, the Court agrees with PAN that there was insufficient evidence that the switching matrix was modified to drop packets as required by the asserted claim. Accordingly, the Court will enter judgment as a matter of law of non-infringement as to claim 8 of the '437 Patent.<sup>16</sup>

#### 1. Claim language and accused technology

Claim 8 of the '437 Patent discloses a system including one processor and memory storing instructions that when executed cause the system to:

provision a packet security gateway, of a plurality of packet security gateways that collectively provide an entire interface across a boundary of a network protected by the packet security gateway and one or more networks other than the network protected by the packet security gateway, with one or more packet filtering rules to be applied to all network traffic traversing the boundary, wherein each packet filtering rule comprises at least one packet matching criterion associated with malicious network traffic and a corresponding packet transformation function; and

configure the packet security gateway to:

receive, via a communication interface that does not have a network-layer address, network traffic traversing the boundary via the packet security gateway, wherein the network traffic comprises received packets and is associated with each host of a plurality of hosts located in the network protected by the packet security gateway, and wherein the received packets comprise:

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<sup>16</sup> Because the Court grants PAN judgment as a matter of law, it does not reach PAN's argument that it is entitled to a new trial on this issue. Rule 59 Mem. in Supp. at 24–26.

first packets traversing the boundary, via the packet security gateway, that originate from outside the network protected by the packet security gateway and are destined for the plurality of hosts; and

second packets traversing the boundary, via the packet security gateway, that originate from the plurality of hosts located in the network and are destined for devices in the one or more networks other than the network protected by the packet security gateway;

responsive to a determination by the packet security gateway that a portion of the received packets corresponds to at least one packet matching criterion specified by the one or more packet filtering rules, drop the portion of the received packets; and

modify a switching matrix of a local area network (LAN) switch associated with the packet security gateway such that the LAN switch is configured to drop the portion of the received packets responsive to the determination by the packet security gateway.

'437 Patent at 22:25–23:4.

Centripetal accused PAN's NGFWs, when combined with Panorama, of infringing claim 8. Multiple NGFWs are the plurality of packet security gateways referenced in the asserted claim and Panorama is the device provisioning the packet security gateways with rules. Tr. 891:5–10.

2. “One or more packet filtering rules to be applied to all network traffic traversing the boundary”

PAN contends that there is insufficient evidence to support the limitation that “one or more packet filtering rules [are] applied to all network traffic traversing the boundary.” JMOL Mem. in Supp. at 22–26 (internal quotation marks omitted). The Court disagrees and finds that there was substantial evidence introduced at trial to establish this limitation.

Claim 8 of the '437 Patent requires that a packet security gateway is “provision[ed] . . . with one or more packet filtering rules to be applied to all network traffic traversing the boundary.” '437 Patent at 22:29–36. As the Court clarified at summary judgment, “in a situation where a packet security gateway is provisioned with more than one packet filtering

rule, the claim is satisfied so long as all network traffic is subject to at least one of the packet filtering rules.” Mem. Op. & Order at 5, ECF No. 702.

Centripetal identified external dynamic lists as the infringing rules that are provisioned by Panorama to the NGFWs and then applied to all network traffic through security policy rules. JMOL Opp’n at 24; Tr. 885:21–886:4, 924:8–21, 926:2–10. PAN argues that undisputed evidence showed that two functions—“ingress process error” and “FW [firewall] inspection applicable”—are applied at ingress and remove packets from the processing queue prior to the application of the security policy rules. JMOL Mem. in Supp. at 22. Therefore, PAN argues, the provisioned rules are not applied to all network traffic transversing the boundary. *Id.* at 22–23.

At trial, PAN advanced this theory of non-infringement through the testimony of its expert and fact witnesses. Tr. 1303:2–1306:13 (testimony of Nir Zuk); Tr. 1388:25–1399:3 (testimony of Dr. John Villasenor). Centripetal’s expert, Dr. Michael Mitzenmacher, also addressed this issue extensively on cross examination and redirect, and disputed PAN’s expert opinions. Dr. Mitzenmacher noted his disagreement with the premise of PAN’s theory, explaining that the ingress rules do not operate as a bypass of the security policy and that the ingress rules are also provisioned by Panorama. Tr. 982:1–9, 983:13–23. Dr. Mitzenmacher also testified that the two functions identified by PAN either applied to malformed packets or packets from an internal host, and therefore those packets do not “traverse the boundary.” Tr. 1014:5–1015:17 (citing DX-1 at 506) (testifying that the forwarding function applied to packets from internal IP addresses); *see* Tr. 988:19–20 (“[Y]ou can also communicate to things within a LAN that are not going to cross the network boundary . . . .”). The jury was entitled to adopt Dr. Mitzenmacher’s opinion regarding this evidence and to reject the opinion of PAN’s expert.

The Court finds that there was substantial evidence to support this claim limitation.



3. “Modify a switching matrix of a local area network (LAN)”

PAN also asserts that there was insufficient evidence to establish that a “switching matrix of a local area network (LAN)” is modified “such that the LAN switch is configured to drop the portion of the received packets.” JMOL Mem. in Supp. at 19 (emphasis and quotation marks omitted). Claim 8 of the ’437 Patent requires that after the packet security gateway determines that a received packet matches a provisioned rule, the system “modif[ies] a *switching matrix* of a local area network (LAN) switch . . . such that the LAN switch is configured to drop the portion of the received packets responsive to the determination by the packet security gateway.” ’437 Patent at 22:60–23:4 (emphasis added). Accordingly, to satisfy this claim limitation, Centripetal must prove not only that packets are dropped in response to the rule matching, but that they are dropped due to a specific modification made to the switching matrix by the packet security gateway.

At trial, Dr. Mitzenmacher provided testimony that the NGFWs used a LAN switch to process packets. Tr. 949:13–955:14. Dr. Mitzenmacher testified that the switching matrix of a LAN switch “determine[s] where things go in and where things go out” and that “underlying software and hardware . . . implement” those decisions. Tr. 950:2–7. In his analysis, Dr. Mitzenmacher relied on the following diagram showing the LAN switch and switching matrix:



PX-543 at 493 (annotations added indicating “Part J” ).

The parties agree that Dr. Mitzenmacher testified that the switching matrix is represented on the “right half of [the] page including the grid.” *See* JMOL Opp’n at 18 (citing Tr. 949:16–950:14, 951:16–953:16). The network card is on the left half of the diagram, and together the right and left halves make up the LAN switch. Dr. Mitzenmacher explained that the above diagram illustrated how a packet would traverse the LAN switch. Tr. 952:18–953:13. Dr. Mitzenmacher testified that the black line with arrows represented the packet’s path (entering the network card at the upper left of the diagram, traveling through the switching matrix to the network card, and then back again through the switching matrix and the network card). *Id.* At “Part J” (on the network card) the “owner enforces the policy” (i.e. matches a provisioned rule) and either forwards the packet to egress or drops the packet. Tr. 953:5–13. Because Dr. Mitzenmacher testified that this change occurs in Part J (which was identified as located in the network card, not the switching matrix), his testimony cannot be interpreted as identifying a change in the switching matrix.

Perhaps recognizing this inconsistency, Centripetal argues that “[t]o apply rules to the traffic, they are sent to the switch, which creates the path that the packet takes through the switch

by modifying the high speed connections that make up the switching matrix.” JMOL Opp’n at 19. But Dr. Mitzenmacher did not provide this testimony. Dr. Mitzenmacher testified that the switching matrix is a series of high-speed connections with multiple entry and exit points, but he does not provide any detail regarding how those connections are modified. Instead, Dr. Mitzenmacher provided the following relevant testimony:

Packets come in, they undergo some various sort of examination that . . . determine[s] where they should go out, and that that is, you know, the switching matrix, and, in fact, it’s by modifying the switching matrix that they’re able to drop packets that should be dropped.

Tr. 950:10–14.

So, the switching matrix is modified[.] [I]nstead of [the packet] continuing on – in its merry way to the exit, there is, you know, rules, policy information there that says wait, switching matrix, don’t actually forward on this packet, block it, you know, it’s not allowed to carry on.”

Tr. 953:22–954:3.

[O]nce you’ve determined according to policy that [the packet is] . . . not to be forwarded, that what it does is it just says, okay, [the packet is] going to sit here and not get forwarded out until - - and, eventually, because you’re just sitting in memory, eventually some[thing] else will come in and write over that memory.

The point is . . . you’re not letting the packet out, you’re not forwarding it. That’s the point. . . .

You’re not following that path anymore. That’s modifying the switching matrix.

Tr. 1016:16–1017:5

Dr. Mitzenmacher’s testimony suffers from several deficiencies. First, as is illustrated by the testimony above, Dr. Mitzenmacher’s opinion on the modification of the switching matrix is largely conclusory. Tr. 950:10–14. And the explanation that he does provide (i.e., that rules instruct the switching matrix to forward or block a packet) is inconsistent with his other testimony about Part J. Moreover, this testimony only addresses what the switching matrix is *doing* not how it is

*modified*. This is due, in part, to Dr. Mitzenmacher’s focus on what happens to the packet—i.e., not “continuing on . . . to the exit,” “sitting in memory,” “not [being] forwarded”—rather than on the switching matrix. Tr. 953:24–35, 1016:18–21. Second, contrary to Centripetal’s contention that rules are sent to the LAN Switch or that those rules modify the “high speed connections” of the switching matrix, Dr. Mitzenmacher did not provide that testimony. Instead, Dr. Mitzenmacher points to rules—that may or may not be pre-existing—and indicates that those rules affect how the packet is processed. Tr. 953:22–954:3. Lastly, even if the rules are sent to the LAN switch (which Centripetal argues is the modification), it is unclear which device is doing the sending. The asserted claim requires that the *packet security gateway* “modif[ies] a switching matrix of a [LAN] switch.” ’437 Patent at 22:41, 22:66–23:4. Dr. Mitzenmacher identified the NGFWs as the packet security gateways. Tr. 891:5–10. However, there is no testimony from Dr. Mitzenmacher, or any other witness, that the NGFWs are responsible for sending the rules to the LAN Switch or performing some other function that modifies the switching matrix.

The evidence that Dr. Mitzenmacher relied on is similarly lacking, merely indicating that the NGFWs use a LAN switch or switching network, with no discussion of how a switching matrix is modified. *See* PX-357 at 465 (“In a Layer 2 deployment, the firewall provides switching between two or more networks.”); PX-528 at 850 (diagram indicating that the NGFW architecture uses a “Qumran – Switch”); Ralston Test. 36:10–37:1, ECF No. 860-1 (explaining that the NGFWs can operate at layer three or layer two interfaces and layer two is a “switch network operating at the broadcast layer”).

Given this lack of evidence, the Court concludes that there is not substantial evidence to support that the accused switching matrix is modified as required by the asserted claim. Accordingly, because the NGFWs combined with Panorama do not practice every limitation of

claim 8 of the '437 Patent, the Court will enter judgment as a matter of law of non-infringement as to that asserted claim.<sup>17</sup>

#### **D. Damages**

The jury awarded Centripetal a \$37,875,000 lump sum royalty for the life of each Asserted Patent, resulting in a total damages award of \$151,500,000. Jury Verdict at 5. PAN asserts that it is entitled to judgment as a matter of law of no damages because the damages award was not supported by substantial evidence. JMOL Mem. in Supp. at 26. PAN argues that Centripetal's damages expert relied on a license that was not comparable to the hypothetical negotiation and did not apportion damages to the value of the patented technology. *Id.* at 27–28. In the alternative, PAN moves for a new trial based on alleged errors related to the admissibility of evidence and erroneous jury instructions. Rule 59 Mem. in Supp. at 2–20.

##### 1. The Federal Circuit's approach to the hypothetical negotiation and apportionment

Upon proving infringement, a patentee is entitled to “damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer.” 35 U.S.C. § 284. One approach to determine a reasonable royalty is through the hypothetical negotiation. *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1324 (Fed. Cir. 2009). This approach “attempts to ascertain the royalty upon which the parties would have agreed had they successfully negotiated an agreement just before infringement began.” *Id.* (citations omitted); *see Radio Steel & Mfg. Co. v. MTD Prods., Inc.*, 788 F.2d 1554, 1557 (Fed. Cir. 1986)

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<sup>17</sup> In addition to finding literal infringement, the jury also found that PAN infringed claim 8 of the '437 Patent under the Doctrine of Equivalents. Jury Verdict at 4. However, Dr. Mitzenmacher's only provided a Doctrine of Equivalents opinion related to the rule provisioning limitation. Tr. 957:5–958:15. Dr. Mitzenmacher did not provide a Doctrine of Equivalents opinion related to the switching matrix limitation. As such, there is not substantial evidence to support that the switching matrix limitation is satisfied under the Doctrine of Equivalents.

(“The determination of a reasonable royalty, however, is based not on the infringer’s profit, but on the royalty to which a willing licensor and a willing licensee would have agreed at the time the infringement began.”). Parties frequently rely on comparable license agreements to establish the reasonable royalty in the hypothetical negotiation. *Bio-Rad Lab’s, Inc. v. 10X Genomics Inc.*, 967 F.3d 1353, 1372 (Fed. Cir. 2020). “Assessing the comparability of licenses requires a consideration of whether the license at issue involves comparable technology, is economically comparable, and arises under comparable circumstances as the hypothetical negotiation.” *Id.* at 1372–73.

Damages may only be awarded “for the use made of the invention by the infringer.” 35 U.S.C. § 284. Accordingly, when accused features do not make up the whole of an accused product, either the royalty base or the royalty rate must be apportioned to account for only the patented technology. *MLC Intell. Prop., LLC v. Micron Tech., Inc.*, 10 F.4th 1358, 1373 (Fed. Cir. 2021); *see Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1226 (Fed. Cir. 2014) (“[T]he ultimate combination of royalty base and royalty rate must reflect the value attributable to the infringing features of the product, and no more.”). The Federal Circuit has “approved the use of comparable licenses to account for apportionment.” *MLC Intell. Prop., LLC*, 10 F.4th at 1374 (collecting cases). This is because “[w]here the licenses employed are sufficiently comparable, this method is typically reliable because the parties are constrained by the market’s actual valuation of the patent.” *Id.* (alteration in original) (quoting *Commonwealth Sci. & Indus. Rsch. Org. v. Cisco Sys., Inc.*, 809 F.3d 1295, 1303 (Fed. Cir. 2015)). This concept is referred to as “built-in apportionment.” *Vectura Ltd. v. Glaxosmithkline LLC*, 981 F.3d 1030, 1040 (Fed. Cir. 2020). “Built-in apportionment effectively assumes that the negotiators of a comparable license settled on a royalty rate and royalty base combination embodying the value of the asserted patent.” *Id.* at

1041. For this reason, built-in apportionment may be an acceptable approach to calculating damages.

The Federal Circuit has considered the issue of built-in apportionment in a handful of cases which are instructive here. In *MLC Intellectual Property, LLC v. Micron Technology, Inc.*, for example, the Federal Circuit found the expert’s comparability analysis insufficient because the expert failed to account for differences between the licensed technology and the accused technology and did not analyze the difference in number of patents in the hypothetical negotiation and proffered license. 10 F.4th at 1374–1375. The Federal Circuit noted that comparability is often found when the past license was between the same parties to the litigation and involved the same patent and accused technology; however, the touchstone of the inquiry is whether the expert “accounted for the differences” between the circumstances and the technology at issue. *Id.* at 1374. Comparatively, in *Bio-Rad Laboratories, Inc. v. 10X Genomics Inc.*, the Federal Circuit found the expert’s comparability analysis sufficient even though one of the comparable licenses did not include the three patents-in-suit, and instead included the entire patent portfolio (over 500 patents). 967 F.3d at 1374–76. But there, Plaintiff’s technical expert addressed the technological similarity between the licensed patents and the patents-in-suit and plaintiff’s corporate witness testified that the main technology driving the agreement was covered by the three patents-in-suit. *Id.* Because the expert established the comparability of the license and assessed the similarity and importance of the technology at issue, the court concluded that the expert was not required to quantitatively adjust the royalty rate from the license. *Id.* at 1377.

These cases make clear that when a comparable license involves different technologies, patents, or parties, a reasonable royalty calculation “must account for differences in the technologies and economic circumstances of the contracting parties.” *Vectura Ltd.*, 981 F.3d at

1041 (quoting *VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1330 (Fed. Cir. 2014)). Where these differences are not addressed, a “comparable license theory does not properly apportion for the value of the patented technology,” *MLC Intell. Prop., LLC*, 10 F.4th at 1374–75, but where they are, the theory may be acceptable.

## 2. Comparability of the Keysight License and apportionment

At trial, Centripetal proffered the expert testimony of James Malackowski to establish the reasonable royalty it sought for infringement of its patents. To inform his reasonable royalty opinion, Malackowski considered four patent licensing agreements entered into by PAN and two entered into by Centripetal. Tr. 1078:24–1079:4. Malackowski found that only one license was comparable to the hypothetical negotiation: a litigation settlement agreement between Centripetal and Keysight Technology, Inc.<sup>18</sup> (“Keysight License”). Tr. 1087:1–4; 1094:24–1095:4, 1095:16–1105:11. Based on the Keysight License, Malackowski concluded the parties to the hypothetical negotiation would have agreed to a [REDACTED] for the life of the asserted patents. Tr. 1081:22–25, 1105:1–6, 1141:15–19. Malackowski did not independently apportion the value of the asserted patents but opined that apportionment was already “built in” to the Keysight License. Tr. 1129:11–1130:22.

The Keysight License was negotiated after five days of trial in a patent infringement action brought by Centripetal against Keysight. Tr. 374:1–12; *see Centripetal Networks, Inc. v. Keysight Techs., Inc.*, No. 2:17-cv-383. Under the terms of the agreement, Centripetal granted Keysight a three-year, non-exclusive license to its present and future worldwide patent portfolio, which at that time included 18 patents. PX-589 at 947; Tr. 1175:4–8. In exchange, Keysight made a onetime

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<sup>18</sup> The agreement also included Ixia, a company acquired by Keysight and a co-defendant in the lawsuit.



payment for past damages and agreed to a three-year license with a [REDACTED]  
 [REDACTED]. PX-589 at 947;  
 Tr. 672:11–678:19, 744:18–24. The royalty payments were subject to [REDACTED]  
 [REDACTED]. PX-589 at 947. Centripetal also agreed [REDACTED]  
 [REDACTED]  
 [REDACTED]. *Id.* at 947–48.

PAN argues that the Keysight License was not comparable because the license: (1) was negotiated in the middle of trial; (2) involved different patents than the Asserted Patents; (3) was for the entirety of Centripetal’s patent portfolio; (4) involved different products than the Accused Products; (5) [REDACTED]; and (6) was a limited three-year license. JMOL Mem. in Supp. at 27–28. PAN also argues that Malackowski’s damages theory of “built in” apportionment was unsupported because Centripetal failed to “present a reliable analysis of the differences between Keysight’s products and PAN’s accused products.” *Id.* at 29. The Court disagrees and finds that Centripetal presented fact and expert testimony demonstrating the comparability of the Keysight License and that Malackowski properly accounted for differences in the technologies and economic circumstances of the contracting parties in the Keysight License and hypothetical negotiation.

Jonathan Rogers, Centripetal’s corporate designee and signatory to the Keysight License, testified as to the factual circumstances surrounding that agreement. Rogers explained that Keysight reinitiated settlement negotiations with Centripetal five days into trial, after Centripetal had put on a majority of its case-in-chief. Tr. 374:1–12. Keysight’s lead counsel had a medical emergency the weekend of the negotiations; however, Rogers explained that the negotiations were initiated prior to that emergency and that it did not impact the negotiations. Tr. 425:10–14. Based

on this information, Malackowski offered his expert opinion that because the litigation was “sufficiently far along, such as both parties have already spent the legal fees, . . . [were] not worried about paying the lawyers, and there [was] enough evidence in discovery,” that the parties could properly weigh the risk of infringement. Tr. 1104:6–18. Accordingly, Malackowski opined, there were no concerns about the fact that the license arose out of litigation. Such testimony properly accounts for the circumstances of the Keysight License negotiation and is consistent with the Federal Circuit’s treatment of licenses that arise out of litigation. *See Prism Techs. LLC v. Sprint Spectrum L.P.*, 849 F.3d 1360, 1369 (Fed. Cir. 2017) (“[T]he parties’ agreement seems especially probative if reached after the litigation was far enough along that the issue was already well explored and well tested.”).

As to the differences in the number of patents and their technical comparability, Rogers testified that the technologies driving the license were the six patents at issue in the Keysight litigation. Tr. 425:22–426:10. Dr. Cole opined as to the technological comparability between the licensed patents and the Asserted Patents. Dr. Cole noted that several of the licensed patents (including those that drove the negotiation) were from the same patent family as the Asserted Patents and that the others covered similar technology. Tr. 671:14–672:7. Relying on this testimony as well as his own experience as a patent licensing professional, Malackowski concluded that the similarity of the technology in the licensed patents and the Asserted Patents supported the comparability of the agreement. Tr. 1103:3–13. This testimony is similar to the testimony provided in *Bio-Rad Laboratories*, as described above, and is consistent with the Federal Circuit’s treatment of comparable licenses. *See Bio-Rad Lab’y.*, 967 F.3d at 1375–76.

Regarding the technical comparability of Keysight and PAN’s products, Malackowski again relied on a technical comparison provided by Dr. Cole. While PAN’s core product is a

firewall and the products at issue in the Keysight License were threat intelligence gateways, Dr. Cole explained that threat intelligence gateways can be integrated within firewalls. Tr. 744:18–24. Referencing the specification sheets for several of the Keysight products, Dr. Cole opined that the Keysight products were technologically similar to PAN’s NGFW, Cortex, and Panorama. Tr. 672:11–679:17 (citing PX-330; PX-328; PX-331; PX-332; PX-374). However, unlike Keysight’s products, Dr. Cole testified that standard firewall features found in PAN’s products were becoming commoditized and that Centripetal’s correlation technology allowed PAN to differentiate itself in the market. Tr. 663:24–669:2. Specifically, the correlation technology allowed PAN’s products to catch advanced cyber-attacks with a low false alarm rate. Tr. 666:9–19. Because the correlation technology enabled PAN to retain a competitive advantage in the firewall industry, Dr. Cole concluded that the technology was more important to PAN and its products than the technology was to Keysight. Tr. 679:23–680:1. Malackowski relied on this expert opinion and explained that because the patented technology was relatively more important to PAN, this fact supported a royalty rate at [REDACTED]. Tr. 1101:25–1102:8, 1102:17–1103:2, 1225:1–6.

Malackowski also addressed other differences between the Keysight License and the hypothetical negotiation. As to the fact that the royalty rate was limited to a [REDACTED], Malackowski explained that he disregarded this term. Malackowski testified that if he had considered this term, he would have looked to the effective rate that was paid out on the patents (based upon the [REDACTED]), which in this case would have led to a higher effective royalty rate for the Keysight License. Tr. 1231:11–19. Regarding the limited duration, Malackowski acknowledged that short-term licenses tend to have higher royalty rates than longer term agreements and that the relatively long life left in the Asserted Patents weighed in favor of the lower rate; however, considering the other factors—particularly

the importance of the technology to PAN's products—he found the [REDACTED] appropriate. Tr. 1113:1–17.

Based on the foregoing evidence, Malackowski opined that the Keysight License was comparable, no further apportionment was required, and that a [REDACTED] royalty rate was appropriate. Tr. 1128:22–1132:11. Malackowski explained how apportionment was already built into the Keysight License. Tr. 1129:11–23. Then, relying on the technical comparability analysis of Dr. Cole, Malackowski explained that while the Accused Products contained a number of unaccused features, those features were “commodity features from an economic perspective.” Tr. 1132:3–11. Malackowski gave substantial weight to Dr. Cole's conclusion that the technology of the Asserted Patents was more significant to PAN's products than the technology of the licensed patents was to Keysight's. Tr. 1131:24–1132:2. Accordingly, Malackowski concluded that the [REDACTED] royalty rate was appropriate and did not require further apportionment. Tr. 1130:5–1131:4.

PAN argues that Malackowski's opinion was insufficient because Centripetal failed to put on evidence specifically comparing the proportion of accused to unaccused features in both Keysight and PAN's products. JMOL Mem. in Supp. at 30. However, the Federal Circuit has never mandated that degree of particularity when establishing built-in apportionment. *See VirnetX*, 767 F.3d at 1328 (“[W]e note that we have never required absolute precision in [apportionment analysis]; on the contrary, it is well-understood that this process may involve some degree of approximation and uncertainty.”). All that was needed was that Centripetal establish the license's comparability and expert analysis that “could reasonably be found to incorporate the required apportionment.” *Bio-Rad Lab's*, 967 F.3d at 1377. Here, Centripetal did just that. Accordingly, the Court finds that the jury's verdict regarding damages was supported by substantial evidence and will deny PAN's motion for judgment as a matter of law of no damages.

### 3. Motion for a new trial

PAN raises a number of issues related to damages that it argues require a new trial. The Court has previously considered (prior to and during trial) the bulk of these issues and rejected the same arguments currently made by PAN. That alone supports denial of the motion for a new trial. *See Trs. of Columbia Univ. in City of New York v. Gen Digit. Inc.*, No. 3:13-cv-808, 2023 WL 8698906, at \*2 (E.D. Va. Sept. 30, 2023) (finding that where the bulk of a motion for a new trial “rehashe[d] arguments previously made,” prior consideration and rejection “alone support[ed] a denial” of the motion). However, even on a second look, PAN’s arguments are not meritorious.

#### *a. Keysight License and Malackowski’s apportionment testimony*

PAN argues that the Keysight License was inadmissible under Rule 402 and/or 403 for lack of comparability and Malackowski’s expert opinion should have been excluded for failure to apportion. Rule 59 Mem. in Supp. at 1. This is simply a repackaging of the argument made above. As explained, there was sufficient evidence supporting the comparability of the Keysight License and Malackowski’s opinion. Further, of the licenses identified by either party, the Keysight License was the only license that Centripetal entered into licensing its patents, was closest in time to the hypothetical negotiation, and covered technology most comparable to the Asserted Patents. Tr. 379:23–25 (only license of a Centripetal patent); 671:14–672:7 (comparability of patents); 1105:7–11 (closest in time). These facts further support the probative value of the Keysight License under the Rule 403 balancing test. Fed. R. Evid. 403. Accordingly, the admission of the Keysight License and Malackowski’s testimony was appropriate, and PAN suffered no prejudice.

b. “Contextual evidence” relevant to the Keysight License

PAN argues that the Court excluded evidence necessary to put the Keysight License in context. Rule 59 Mem. in Supp. at 7–12. PAN raises three principal arguments that the Court will address in turn.<sup>19</sup>

First, PAN argues that the Court impermissibly limited PAN’s ability to cross examine Dr. Cole on the comparability of the Keysight products and the Accused Products. Rule 59 Mem. in Supp. at 9. PAN mischaracterizes the Court’s ruling. The Court, on Centripetal’s objection, prohibited PAN from asking Dr. Cole about the work that he did for the Keysight litigation and about the expert testimony related to damages in *that case*. Tr. 750:17–751:11. Such questioning would have been confusing for the jury as well as prejudicial. The Court did not preclude PAN from cross-examining Dr. Cole regarding the analysis he conducted in *this case* that compared Keysight’s products to the Accused Products. *See* Tr. 751:10–11 (“You can re-ask your question a different way.”). In fact, PAN questioned Dr. Cole accordingly. Tr. 744:18–24, 747:21–750:8, 751:13–21. Therefore, the Court did not err in issuing its rulings, nor was such ruling prejudicial.

Second, PAN asserts that the Court erred in not permitting PAN to cross-examine Centripetal’s witness about the fact that several of the patents included in the Keysight License were subsequently invalidated and the fact that Keysight was found not to have infringed one of the licensed patents in proceedings before the International Trade Commission (“ITC”). Rule 59

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<sup>19</sup> PAN also argues that it was prejudiced because it was “forced to devote significant trial time” to rebutting the comparability of the Keysight License. Rule 59 Mem. in Supp. at 8. Because the Keysight License was admissible, devoting trial time to rebutting comparability is not prejudice. Moreover, at the end of trial PAN still had three hours of trial time remaining that it could have allocated to addressing infringement, patent validity, or any of the other numerous issues at trial.

Mem. in Supp. at 9–11. PAN argues that “this context was necessary to ‘present the jury with a full picture’ of the Keysight [License].” *Id.* at 10 (citations omitted).

PAN’s argument relates to the propriety of considering facts that occurred after the hypothetical negotiation. As previously explained, the hypothetical negotiation “attempts to ascertain the royalty upon which the parties would have agreed had they successfully negotiated an agreement just before infringement began.” *Lucent Techs.*, 580 F.3d at 1324 (citation omitted). It therefore rests on a legal fiction that the parties sat down, prior to infringement, and negotiated a license for the infringer’s use of the asserted patents. *See Panduit Corp. v. Stahl Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1159 (6th Cir. 1978). While those negotiators would necessarily only have access to pre-infringement information, the Federal Circuit has recognized that in certain circumstances post-infringement evidence is probative and may be considered. *Lucent Techs.*, 580 F.3d at 1333 (citing *Fromson v. W. Litho Plate & Supply Co.*, 853 F.2d 1568, 1575 (Fed. Cir. 1988)). This information is colloquially referred to as being contained within the “book of wisdom.” *Fromson*, 852 F.2d at 1575–76 (quoting *Sinclair Ref. Co. v. Jenkins Petroleum Co.*, 289 U.S. 689, 698–99 (1933)). While there is no bright-line rule regarding what post-infringement evidence may be considered, evidence admitted under the “book of wisdom” generally provides facts or data to supplement “information that the parties would frequently have estimated during the negotiation.” *Lucent Techs.*, 580 F.3d at 1333–34. For example, in *Lucent Technologies, Inc. v. Gateway, Inc.*, the Federal Circuit explained that that post-infringement data regarding how often consumers used an infringing feature of an accused product was relevant to the hypothetical negotiation because it shed light on a fact frequently estimated during a license negotiation. *See id.* at 1334 (explaining that “[e]ven though parties to a license negotiation will usually not have precise data about future usage, they often have rough estimates as to the expected frequency of

use,” usually in the form of “sales projections . . . , consumer surveys, focus group testing, and other sources”). An expert can rely on such data, so long as it otherwise “meets admissibility requirements” and is given its “proper weight, as determined by the circumstances of each case.” *Id.* at 1334.

PAN’s attempt to introduce evidence that other tribunals have subsequently invalidated Centripetal’s patents or found that Keysight did not infringe stretches the “book of wisdom” too far. Unlike the example in *Lucent*, this evidence would not establish facts that the hypothetical negotiator would routinely estimate at the time of the hypothetical negotiation. *See Lucent Techs.*, 580 F.3d at 1325 (“The hypothetical negotiation . . . assumes that the asserted patent claims are valid and infringed.”). Instead, PAN appears to argue that the evidence was relevant to demonstrate that “subsequent events fundamentally changed the circumstances that drove the Keysight [License].” Rule 59 Mem. in Supp. at 10. PAN points to no case where the “book of wisdom” was applied in this context, and the Court can find none. Further, such evidence would have little probative value because that information would have been unknown to the negotiators at the time they negotiated the Keysight License and therefore did not impact the value placed on the patented technology. On the other hand, the evidence would have been highly prejudicial as it would have suggested to the jury that Centripetal’s patents in this litigation were invalid or not infringed. Accordingly, the Court did not err in excluding this testimony.

Lastly, PAN argues that the Court improperly limited its cross-examination of Malackowski as it relates to two topics. PAN questioned Malackowski as to whether Dr. Cole relied upon patents and accused products that were no longer at issue in the litigation in his comparability analysis. Tr. 1192:1–9. The Court sustained Centripetal’s objection noting that it



ran afoul of a previously ruled on motion in limine<sup>20</sup> and was a line of questioning that should have been directed at Dr. Cole as the expert that provided the comparability analysis. Tr. 1193:6–1195:2. PAN also sought to cross-examine Malackowski concerning his prior testimony before the ITC regarding the comparability Keysight License. Tr. 1202:13–1204:12. As the Court explained in a pretrial hearing, PAN was free to impeach Malackowski with his prior deposition or hearing testimony, however, it was improper for PAN to attempt to impeach Malackowski with someone else’s statement, specifically the ITC opinion characterizing Malackowski’s testimony. Jan. 16, 2024, Hr’g Tr. 5:18–8:21. The Court did not err in either of these rulings.

*c. Third-party valuations of PAN acquisitions*

At trial, Malackowski testified that third-party valuations of PAN’s acquisition of eleven network security companies served as a “reasonableness check” on his conclusion that a [REDACTED] reasonable royalty rate was appropriate. Tr. 1106:22–1108:9, 1110:25–1111:21. PAN argues that this testimony constituted inadmissible hearsay and was unreliable because Malackowski failed to conduct any comparability analysis for the acquisitions. Rule 59 Mem. in Supp. at 18–20. Malackowski’s statements were not inadmissible hearsay, and he properly contextualized the valuation reports in his analysis.

As an expert, Malackowski was “permitted to rely upon certain ‘facts or data,’ even if hearsay, if they are ‘of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject.’” *Ward v. Dixie Nat’l Life Ins. Co.*, 595 F.3d 164, 182

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<sup>20</sup> The line of questioning was inadmissible under a motion in limine requested by PAN: “Unless used for witness impeachment, the parties shall be precluded from introducing evidence, testimony, or argument regarding pretrial proceedings or issues, including, but not limited to, discovery disputes, dispositive motion practice, dropped infringement theories, dropped invalidity theories, or the fact that claims related to certain patents are stayed.” Mem. Op. & Order at 9, ECF No. 715.

(4th Cir. 2010) (quoting Fed. R. Evid. 703). Valuation reports are a type of data reasonably relied upon by experts in Malackowski's field and on that basis, he could rely upon them. Tr. 1106:25–1107:24. Even so, Malackowski did not rely on the valuation reports to arrive at his reasonable royalty rate. Malackowski explained that his reasonable royalty rate opinion was based on the comparability of the Keysight License, while the valuation reports were a check on this opinion. Tr. 1111:2–21. This analysis differentiates Malackowski's testimony from situations where an expert impermissibly relied on noncomparable licenses to significantly adjust upward the reasonable royalty without any factual findings that accounted for the technological and economic differences between those licenses and the asserted patent. *See, e.g., ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860, 869–73 (Fed. Cir. 2010). Accordingly, PAN has neither shown error nor prejudice from that ruling.

*d. Damages jury instruction*

Lastly, PAN argues that the Court erred in declining to instruct the jury on the difference between a litigation settlement and the hypothetical negotiation. Rule 59 Mem. in Supp. at 6–7. The Court's instruction on comparable license agreements stated as follows:

When determining a reasonable royalty, you may consider evidence concerning the amounts that other parties have paid for rights to the Asserted Patents, or for rights to similar technologies. A license agreement need not be perfectly comparable to a hypothetical license that would be negotiated between Centripetal and Palo Alto Networks in order for you to consider it. Whether a license agreement is comparable to the license under the hypothetical license scenario depends on many factors, such as whether they involve comparable technologies, comparable economic circumstances, comparable structure, and comparable scope. However, if you choose to rely upon evidence from any license agreements, you must account for any differences between those licenses and the hypothetically negotiated license between Centripetal and Palo Alto Networks in terms of the technologies and economic circumstances of the contracting parties, when you make your reasonable royalty determination.

Jury Instr. at 39, ECF No. 853; Tr. 1879:25–1880:17.

PAN asserts that the Court erred in not further specifying that “the hypothetical license is deemed to be voluntary” and that the jury “may consider whether the license agreement is between parties to a lawsuit” and whether the license agreement was a settlement “influenced by a desire to avoid further litigation.” Rule 59 Mem. in Supp. at 6–7; Proposed Jury Instr. at 131, ECF No. 741.

While the Federal Circuit Bar Association’s Model Patent Jury Instructions<sup>21</sup> recommends including PAN’s proposed jury instruction where “litigation-related agreement is presented to the jury,” the Court does not find it was an error not to have done so. The unchallenged portion of the Court’s instruction properly directed the parties to consider “many factors, such as whether they involve comparable technologies, comparable economic circumstances, comparable structure, and comparable scope.” Jury Instr. at 39. While not specifically directing the parties to consider whether a comparable license was born out of litigation, such information could undoubtedly be considered under the Court’s instruction. Accordingly, the Court finds that it was not legal error to decline to provide PAN’s proposed instruction. *See Volvo Trademark Holding Aktiebolaget v. Clark Mach. Co.*, 510 F.3d 474, 485 (4th Cir. 2007) (explaining that a failure to provide a more detailed instruction did not warrant a new trial where the given instruction adequately stated controlling legal principles).

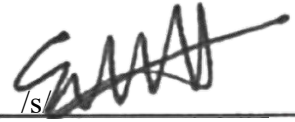
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<sup>21</sup> 2020 Federal Circuit Bar Association Model Patent Jury Instruction, B.5.9

### III. CONCLUSION

For the reasons stated above, PAN's Motion for Judgment as a Matter of Law, ECF No. 900, is granted in part and denied in part and its Motion for a New Trial, ECF No. 906, is denied.

An appropriate Order shall issue.



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Elizabeth W. Hanes  
United States District Judge

Date: October 3, 2024  
Norfolk, Virginia